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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/048,036	01/23/2002	Gregory W. Richard	06640	1189

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EXAMINER	
LAURITZEN, AMANDA L	
ART UNIT	PAPER NUMBER
3737	
MAIL DATE	DELIVERY MODE
09/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/048,036	RICHARD, GREGORY W.	
	Examiner	Art Unit	
	Amanda L. Lauritzen	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *43-72, 75-84* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *43-72 and 75-84* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *27 March 2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

This action is in response to the Amendment submission of 26 June 2006.

Response to Arguments

Regarding amendments to independent claims to further specify that images are "simulated", Examiner agrees that Vaezy et al. '867 does not fairly teach or suggest this feature. New grounds of rejection addressing this limitation are presented herein.

Applicant has further amended independent claims to specify that "progressive" effects of an illness are displayed to the user and expresses that this feature is not taught or suggested by Vaezy; Examiner disagrees and points out that Applicant's remarks state that, "an image sequence progressing through the *entire effects* of the illness or treatment from a healthy body to an ill body or vice versa" is encompassed by the invention, but this is not the same as merely stating that progressive effects of an illness are displayed (as claimed). Since the claim does not fully specify that a progression through the entire effects of illness and/or treatment are displayed, Examiner understands the invention of Vaezy to clearly suggest mere view of progress of a treatment site or illness because the reference teaches that, "any changes in the treatment site can be seen in real time" (abstract). Therefore any progression or change in the diseased site that takes place during the medical examination will be displayed to the user in real time, and the claim, in this respect, does not distinguish from the method disclosed by Vaezy et al. This real time display constitutes a sequence of images that will inevitably show the progress of a diseased site.

Regarding claim 63 and recitation of, "receiv[ing] an input command selecting an illness/treatment", Examiner understands that the method presented by Vaezy would include a variety of input commands, as this is well known in the art of medical diagnostics. Examiner

also points out that the claim is not actually stating that one of *both* an illness or treatment is selected. As claimed, it is interpreted that inputs related to one (i.e., treatment) are selected, absent from the other (i.e., illness). Here Examiner recognizes that a treatment site is being imaged, and therefore user-inputs in the method of Vaezy will at least correspond to treatment (such as increasing a power level to a therapeutic level, as in the abstract). As claimed, since it has been shown that input commands will correspond to at least one of illness and treatment, the limitation is explicit in the reference.

Regarding a list of body systems, Examiner understands the method of Vaezy et al. to be applicable for any number of different disease sites; therefore Examiner understands the software interface to be adaptable to meet the variety of diagnostic conditions presented at different bodily locations (for example, in the case of treating uterine fibroids, or the general case of causing insult to the blood vessels supplying nutrients and oxygen to a tumor, both constituting diverse treatment conditions and each disclosed as a capability of the invention in the abstract of Vaezy).

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 43, 53, 63, 75 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaezy at al. (US 6,425,867) in view of Herren et al. (US 6,108,635).

Vaezy et al. disclose all features of the claimed invention, as detailed in the prior Office action. The method ultrasonic imaging of a treatment site undergoing therapy includes generation of an image sequence in which the progressive effects of an illness and/or treatment is viewable in real time. The method is specific to distinguishing healthy from diseased tissue and includes intermediate imaging of the region to present changes in response to treatment (abstract; col. 5, line 19 – col. 6, line 65). The method of Vaezy et al. is not specific to an imaging sequence based on a wire frame model of a living body, but the images disclosed represent images in which healthy and diseased tissues are differentiated so that physicians may appropriately diagnose and prescribe a treatment plan.

The method of Vaezy et al. does not specifically include providing simulated images, but simulated image sequences are taught by Herren et al. for the purpose of clinical trial design and exploration of disease progression in response to a given intervention with simulation modeling (cols. 5 and 6). It would have been obvious to one of ordinary skill in the art at the time of

invention to include simulated image sequences in the method and apparatus of Vaezy et al. for the purpose of demonstrating progression of a disease both with and without an intervention, as taught by Herron et al. at col. 7, lines 20-36).

2. Claims 44-52, 54-62, 64-72, 76 and 78-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaezy and Herron et al. as applied to claims 43, 53, 63, 75 and 77 above, further in view of Kizakevich et al. ("Virtual Medical Trainer").

Vaezy in view of Herron et al. includes all features of the invention as substantially claimed, as described above, but does not specifically address generating a storyboard of the images of the healthy/diseased tissue or region to be viewed by physicians representing the outcome associated with different treatments (such as different drugs). The concept of generating a storyboard along with imaging, either model or actual patient image data, is well known in the art as demonstrated by Kizakevich et al. where simulations are utilized to assess treatments and follow-up, which includes the limitations claimed. It would have been obvious to one of ordinary skill in the art at the time of invention to apply the teachings of Kizakevich et al. to provide a storyboard with the diagnostic and treatment assessment method including simulated modeling, as disclosed in both Vaezy as combined with Herren et al., for the purpose of adequately presenting signs and symptoms of disease for training purposes.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda L. Lauritzen whose telephone number is (571) 272-4303. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ALL
9/12/2007

BRIAN L. CASLER
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